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Goddard Space Flight Center



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View Factor Computer Program [VIEW]

The problem:

An automatic method of generating the large view factor matrices required for radiative NASTRAN (LAR-10822) thermal analyses was needed.

The solution:

A view factor program was developed which could efficiently interface with NASTRAN input requirements.

How it's done:

An existing view factor program, RAVFAC (MFS-21075), was modified to accept NASTRAN and/or RAVFAC surface descriptions. The output formatting was altered to produce view factor matrices which could be directly input to NASTRAN. Core and CPU usage improvements were also implemented, and several corrections were made to the automatic shading logic.

Notes:

1. The program will compute view factors by contour integration and/or by finite difference (double summation) techniques.
2. This program was written in FORTRAN IV (91%) and ASSEMBLER (9%) for the IBM 360 computer. The original RAVFAC program was written for the UNIVAC 1108 computer.
3. Inquiries concerning the programs should be directed to:

COSMIC
112 Barrow Hall
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Athens, Georgia 30601

References: GSC-11910 (VIEW)
LAR-10822 (NASTRAN)
MFS-21075 (RAVFAC)

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